

REMARKS

1. Status of the Claims

Claims 1-8, 11-15, 17, and 22-29 as amended herein; claims 9-10 as filed; and claims 44-46 as added herein, are pending in the Application. Applicants believe that the objections and rejections contained in the Office Action have been overcome as discussed below.

2. Objections to the Specification

The Examiner has objected to the specification for failing to provide proper antecedent basis for the claimed subject matter, specifically “pentane-2,4-dione-1,5-diol” in claim 27. The Applicants have herein submitted a replacement paragraph for the paragraph beginning at line 22 on page 9 of the Specification and respectfully request that the Examiner withdraw this objection.

The Examiner has also objected to the specification because the applicants refer to the claims on page 7. The Applicants have herein submitted a replacement paragraph for the paragraph beginning at line 4 on page 7 of the Specification and respectfully request that the Examiner withdraw this objection.

3. Objections to the Claims

The Examiner has objected to claims 12-23, 28, and 29 under 37 C.F.R. § 1.75(c) as forming improper multiple dependent claims. Applicants have herein amended claims 12 and 14 (from which claims 13, 15-23, 28, and 29 depend) and cancelled claims 16 and 18-21, and respectfully request that the Examiner withdraw these objections.

4. Claim Rejections Under 35 U.S.C. § 112

Claims 3-8, 11, and 25 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. In particular, the Examiner rejected claims 3, 4, 7, and 8 for “attempt[ing] to redefine what is already set forth in independent claims 1 and 2.” Applicants have herein amended claims 1-4, 7, and 8, and respectfully request that the Examiner withdraw these rejections.

The Examiner also rejected claims 5, 6, and 11 stating that “[i]t is unclear as to whether Applicants intend a compensating volume of sample, indicator or ligand. The same applies in

claim 11, which recites ‘supplementary volume.’” In each case, it is a volume of a diluent, the claims 5, 6, and 11 are amended accordingly.

The Examiner has also rejected claim 25 for misspelling the term “bathophenanthroline.” Applicants have herein amended claim 25 and respectfully request that the Examiner withdraw this rejection.

5. Claim Rejections Under 35 U.S.C. § 103

Claims 1-11, 24, and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lung et al.* (U.S. Patent No. 5,061,639) in view of *Bauer et al.* (U.S. Patent No. 5,320,969). Applicants respectfully traverse the rejections and request favorable reconsideration.

Lung et al. and Bauer et al. Are Non-Analogous References That Cannot Be Combined

Applicants respectfully submit that *Lung et al.* and *Bauer et al.* are non-analogous references directed to solving completely different problems. *Lung et al.* is directed to a method of calculating dispensed volume. *See, e.g., Lung et al.*, Abstract, first sentence; Office Action, p. 4. In contrast, *Bauer et al.* is not directed to determining volumes, but to the determination of the specific gravity of a test sample. *See, e.g., Bauer et al.*, Abstract, first sentence. Thus the methods in *Lung et al.* and *Bauer et al.* are directed to vastly different applications.

Bauer et al. define the specific gravity as “a measure of the relative proportions of solid material dissolved in a test sample to the total volume of the sample.” *Bauer et al.*, col. 1, lines 31-34. In general, the specific gravity is defined as the relation of the weight of a test sample, such as urine, to the weight of water. *Bauer et al.*, col. 2, equation 1. Therefore, *Bauer, et al.* is not directed to determining volumes.

Moreover, the Examiner states that “*Bauer et al.* teach a reagent composition comprising a complex formed from a polyvalent metal ion having a valence of at least two and an indicator capable of interacting with the metal ion to provide a polyvalent metal ion complex (col. 4, lines 50-58).” Office Action, p. 5. There is no suggestion in *Bauer et al.*, however, that the complexes between polyvalent metal ions and indicator molecules could be utilized for the application of Beer’s Law (*see Lung et al.* col. 2, lines 36-52) or for the determination of

volumes. Thus, there is no motivation in either *Bauer et al.* or *Lung et al.*, or within the knowledge of one of skill in the art, to combine *Bauer et al.* and *Lung et al.*

Taken Alone, Lung et al. Completely Lacks a Limitation of Applicants' Claims 1 and 2

As stated by the Examiner, “Lung et al differs from the instantly claimed invention in that Lung et al use a different colorimetric reagent than the chromophoric indicator and metal ion complex used in the instant invention.” Office Action, p. 5. Applicants claim the step of “staining of said mixture in the container by adding a chromophoric indicator” in claim 1 and “Adding a chromophoric indicator to said liquid to achieve a specific concentration of said indicator and thereby specific staining of the liquid” in claim 2. Because “adding a chromophoric indicator” is completely absent from the disclosure of *Lung et al.*, *Lung et al.* does not render obvious, either alone or in combination with another reference, the present claims 1 or 2, or the claims depending therefrom.

Even if Lung et al. Is Combined with Bauer et al., the Combination Still Completely Lacks a Limitation of Applicants' Claims 1 and 2

The Examiner states that “[i]t would have been obvious to one of ordinary skill in the art to substitute the colorimetric reagent of Lung et al for the polyvalent metal ion-indicator complex of Bauer et al to provide a reagent resulting in enhanced color transition independent of the sample condition (i.e. pH) and without interfering with other substances in the sample.” In determining specific gravity, however, *Bauer et al.* does not disclose using optical absorption measurements, but only the color transition of a sample. For example, Bauer discloses that in urine samples present ions such as Na^+ , K^+ , Ca^{++} , or Mg^{++} are used to replace a polyvalent metal ion such as Hg^{++} or Ca^{++} , which had been previously complexed with a an indicator molecule. *See, e.g., Bauer et al.*, col. 15, lines 44-64. Progressive replacement of the polyvalent metal ion produces bleaching of the originally intensely purple colored polyvalent metal ion-indicator complex (Hg/diphenylcarbazone) in solution. *See id.* Even slight changes from 1.000 to 1.030 in the specific gravity of a test specimen caused the color of the solution to change from intense purple through purple-lavender through lavender to pink-lavender. *See id.* Because “adding a chromophoric indicator” is completely absent from the disclosure of *Bauer et al.*, *Bauer et al.*

does not render obvious, either alone or in combination with another reference, the present claims 1 or 2, or the claims depending therefrom. Because "adding a chromophoric indicator" is completely absent from the combined disclosure of *Lung et al.* and *Bauer et al.*, the combination of *Lung et al.* in view of *Bauer et al.* does not render obvious, either alone or in combination with another reference, the present claims 1 or 2, or the claims depending therefrom.

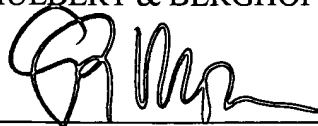
Although the Applicants respectfully disagree with other statements made by the Examiner in this Office Action, unless required to by the Examiner, Applicants will not address the merits of any such statements, which are not conceded. Without addressing the merits of the Examiner's statements regarding claims 3-11, 24, and 25, which are not conceded, Applicants point out that these claims depend from and include all of the limitations of either claim 1 or 2. Therefore, these claims distinguish the cited reference for the same reasons discussed above with regard to claims 1 and 2. It is respectfully requested that the Examiner withdraw his rejection of these claims.

CONCLUSIONS

Applicants believe the present claims to be in condition for allowance, and earnestly request early notification of same. If, for any reason, the Examiner is unable to allow the Application on the basis of this amendment and feels that a telephone conference would help clear up any unresolved matters, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Date: March 29, 2005

Respectfully submitted,
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